

B1
10. (Amended) The improved method of claim 7 wherein the resin is a styrene resin and the cellulosic material is applied no later than about ten minutes prior to the onset of the curing reaction.

REMARKS

In the Official Action of August 23, 2002, the restriction requirement that was traversed by Applicants was made final and claims 1-6, 15, 21, and 22 were withdrawn from consideration. Claims 9-11 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to point out and claim that which Applicants regard as their invention. Claims 7, 8, 14, and 16-20 were rejected under 35 U.S.C. 103 as being unpatentable over the combination of Thrash and Patel, *et al.* ("Patel"). Claims 9-13 were rejected under §103 over Thrash, Patel, and Benton, *et al.* ("Benton"). For the following reasons, Applicants respectfully traverse these rejections.

First with respect to the §112 rejection of claims 9-11, claims 9 and 10 have been amended to answer the concerns noted in the Action. Claim 11, however, was not amended because it is already clear to one of ordinary skill in the art.

In response to the §103 rejection of claims 7, 8, 14, and 16-20, Applicants certainly agree that Thrash lacks any disclosure of adding a filler prior to curing to reduce VOC emissions. Further (and contrary to the allegation set out about two thirds of the way down page 3 of the Action that col. 7, lines 27-39 of Thrash would cause one to assume that cellulosic material is added prior to curing), Thrash does not inherently teach that the cellulosic material should be added to a resin prior to curing. To inherently teach, a reference must include disclosure from which the claimed method step must necessarily follow; Thrash does not rise to that level. Further, Applicants specifically traverse the allegation on page 3 of the Action to the effect that once it is known to add cellulosic material prior to cure, the art only need to suggest that "cellulose extenders lower emissions of volatiles upon curing the resin." As stated in the decision in *In re Newell* (13 U.S.P./Q.2d 1248 (Fed. Cir. 1989), "a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination."

Applicants also traverse the allegation at the bottom of page 3 of the Action that "[o]ne of ordinary skill in the art would know that fillers or extenders reduce the amount of resin used to make a product and hence would also reduce the amount of volatiles given off when the resin cures." It is not necessarily true that a reduction in the amount of resin used to make a product will reduce the amount of volatiles given off when the resin cures. The volatiles liberated by a curing thermoset resin represents a much more complex function. Temperature and/or the rate of a

chemical polymerization process that can consume VOC monomers and generate a peak exotherm play a much more important role in the amount of volatiles given off than the addition of fillers or extenders.

Not only is it not true that a reduction in the amount of resin always reduces volatiles, and not only do variables such as temperature and polymerization rate play a more important role in reducing volatiles than the addition of fillers, but also Applicants do not claim a method of adding a filler or extender before curing. Instead, independent claim 7 recites a method in which "a cellulosic material" is added to the resin before curing. The distinction is important because the art teaches that fillers should be non-porous. The manufacturers/suppliers of fillers have even devised a test, known as the oil absorption test, to measure the effect of filler porosity on resin systems because the most desirable fillers being those that show little or no absorption. Cellulosic materials are, by their nature, porous and their use in the present invention therefore contravenes the teaching of the art.

In summary, the invention recited in claim 7 therefore reduces volatiles (a) by adding a cellulosic material (when it is known in the art that adding fillers does not necessarily reduce volatiles), (b) at a specified time (that is not taught in the art cited in the Action), (c) when other variables (such as temperature and polymerization rate) play a more important role in reducing volatiles than the addition of fillers, and (d) when the particular filler that is utilized in this method is highly porous (therefore claiming the very thing which the art teaches against). How could such a claim be considered obvious to one of ordinary skill in the art, especially when the primary reference that is cited (Thrash), as admitted in the Action, lacks a clear disclosure that the material utilized as a filler should be added prior to curing to reduce VOC emissions? In light of these many differences between the combination of Thrash and Patel, it is respectfully submitted that the Action fails to establish a *prima facie* showing of the obviousness of independent claim 7, and reconsideration and withdrawal of the rejection of claim 7 is therefore respectfully requested.

The rejection of claims 8, 14, and 16-20, dependent upon claim 7, is also respectfully traversed. With respect to claims 8, 19, and 20, it is alleged on page 4 of the Action that the percent lignin in the cellulosic material disclosed in Thrash and/or the absorbing of lignin onto the cellulosic material (to increase and/or control lignin content) would have been within the skill of one of ordinary skill in the art. Even if it is admitted for the purposes of argument that this allegation is accurate (and Applicants do not so admit), a teaching as to the amount of lignin in the method disclosed in Thrash is not the same as a teaching of the amount of lignin in a cellulosic filler that is added to a thermoset resin to decrease VOC emissions as recited in the claims of the

present application. Further, there is no art of record that shows that it is within the skill in the art to select a certain percentage of lignin, and certainly no disclosure that the range specified in claim 8 and/or the process recited in claims 19 or 20 should be utilized. If such art exists, it is respectfully requested that the art be made of record in the application; if it is within the Examiner's personal experience that a cellulosic material of specified lignin content should be added to a thermoset resin, it is respectfully requested that an affidavit be made of record to that effect. MPEP §2144.03. In the absence of such evidence, it is respectfully submitted that the Action fails to establish a *prima facie* showing of the obviousness of claims 8 and 19-20.

It is also alleged on page 4 of the Action that "[i]t is fairly well known in the art to reduce the temperature of curing as a method of reducing volatiles given off during the cure of a resin" such that the method recited in claim 14 would have been obvious to one of ordinary skill in the art at the time the invention was made. This allegation is also traversed for at least two reasons. The first reason is that the art relied upon in rejecting claim 14 does not disclose reducing the temperature at all, and therefore cannot disclose a reduction in temperature of the purpose of reducing VOC emissions. In the absence of any art that teaches this step in the claimed method, if it is within the Examiner's experience that this step is known in the art, it would be appropriate to make an affidavit of record to that effect (*see* MPEP §2144.03, cited in the preceding paragraph). The second reason for traversing this allegation is that it is known in the art that a reduction in temperature has at least two undesirable effects: (1) an increase in the viscosity of the neat thermoset liquid solution and (2) retarding the activator, and therefore prolonging or even stopping the final curing process. It therefore appears that, just as was the case with the use of a porous material for a filler as discussed above in connection with the rejection of claim 7, the art teaches away from the invention the Applicants have claimed in claim 14. It is therefore respectfully submitted that the rejection of claim 14 is improper.

Turning now to the rejection of claims 16-18, Applicants do not see any allegations in the Action as to how the art discloses the particular type of cellulosic material that is utilized as recited in claim 16, so it is therefore respectfully submitted that the rejection of this claim is improper. Claims 17 and 18 recite the size of the cellulosic materials, and the Action alleges (page 4) that Thrash teaches "a suitable size component" and that "the exact sizes used would have been obvious dependent on degree of reinforcement for the cellulosic material." The remarks set out above with regard to the lack of relevance of this alleged teaching of Thrash (in connection with lignin content) to the method claimed in the captioned application) are re-urged here and it is respectfully requested that if it is in the art and/or within the Examiner's personal experience to

utilize a selected size of cellulosic material, it is requested that such evidence be made of record. In the absence of any such evidence, however, it is respectfully submitted that the Action does not establish a *prima facie* showing of the obviousness of the invention claimed in claims 17 and 18.

With regard to the rejection of claims 9-13, Applicants agree that neither Thrash nor Patel, alone or in combination, teaches a coating of cellulosic material, styrene resin, accelerators, or limiting the temperature at which the resin cures. Whether Benton teaches wax suppressants which form a coating serving as a barrier to VOCs during curing as alleged near the bottom of page 4 of the Action is irrelevant to claim 9, which recites the application of a coating of **cellulosic material** over the mixture of resin and cellulosic material. Nor does the Action identify a suggestion in the art to combine the teaching of a coating in Benton with the teaching of cellulosic material in Thrash. The Action does allege that because "styrene resin and promoter are well known and would have been obvious in the resin formulation of Thrash" and because "it is known in the art to form VOC barriers on the surfaces of resin articles, it would have been obvious . . . to apply a cellulosic coating on the article of Thrash." However, these allegations appear to be a *non sequiteur* in that they do not identify a reason for combining Thrash with either of Patel or Benton; indeed it may be telling that there is no mention of the latter two references in the last four lines of page 4 of the Action and the first two lines of page 5 of the Action. To establish a proper *prima facie* showing of obviousness, it must be shown that the art includes (a) all the elements of the claimed combination, (b) a suggestion that the elements be combined, and (c) some expectation that the combination can be made successfully. MPEP §2142. Here, it is admitted in the Action that the art does not teach a coating of cellulosic material, no teaching of a suggestion to combine the references appears to have been identified in the Action, and it does not appear that the Action even tried to identify an expectation of success. In the absence of these elements of a *prima facie* showing of obviousness, it is respectfully submitted that the rejection of claim 9 is improper.

Claims 10 and 11 recite that the cellulosic coating is applied at a specified time in the reaction. The only teaching as to timing that is identified in the Action is the allegation on page 3 of the Action that Thrash inherently teaches that the cellulosic material is added prior to curing. This allegation was traversed above in the remarks relating to the rejection of claim 7 and those remarks are re-urged here with regard to the rejection of claims 10 and 11. Further, even if it is admitted for the purposes of argument (and Applicants do not so admit) that Thrash teaches the addition of cellulosic material prior to curing, Thrash does not teach that it should be added at some specified time prior to cure, and certainly does not teach that it should be added "no later than about ten minutes prior to the reaction" as recited in claim 10. Nor does Benton add the

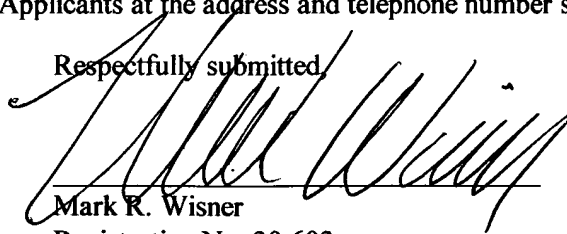
disclosure that is missing from Thrash. Reconsideration and withdrawal of the rejection of claims 10 and 11 in light of the failure to establish a *prima facie* showing of the obviousness of these claims is respectfully requested.

With regard to claim 12, reciting the acceleration of the reaction, it is alleged in the Action that Benton teaches the use of promoters for accelerating the reaction. Again, however, there is no allegation in the Action that there is a teaching in these references that the accelerators that are allegedly disclosed in Benton should be used in a method of or for the purpose of reducing VOC emissions. Nor does the Action even attempt to establish the third required element of a *prima facie* showing of obviousness, namely, an expectation of success. In the absence of these two required elements of a *prima facie* showing of obviousness, it is respectfully submitted that the §103 rejection of claim 12 is improper and should be withdrawn.

Finally, claim 13 recites limiting the temperature at which the resin cures. Claim 14 (dependent on claim 7 whereas claim 13 depends from claim 9) includes that same recitation, and the remarks set out above with regard to the §103 rejection of claim 14 are equally applicable to the rejection of claim 13 and are therefore re-urged here as if fully set forth in this paragraph. It is also noted that Benton does not provide the disclosure that is missing from Thrash and Patel such that the citation to that third reference does not make the rejection of claim 13 any more proper than the rejection of claim 14 over the combination of Thrash and Patel. For these reasons, reconsideration and withdrawal of the §103 rejection of claim 13 is respectfully requested.

Entry of the amendments set out above, consideration of the remarks set out herein, reconsideration and withdrawal of the rejections, allowance of the claims, and passage of the application to issuance are all respectfully requested. In the event there are questions, please contact the undersigned attorney for Applicants at the address and telephone number set out below.

Respectfully submitted,



Mark R. Wisner
Registration No. 30,603
Alan H. Gordon & Associates
2925 Briarpark, Suite 930
Houston, Texas 77042
Telephone: 713.789.6200
Facsimile: 713.789.6203

ATTORNEY FOR APPLICANT

Date: February 24, 2003